American Bosch in Springfield, Mass. to remain abreast of advancing technology.

Economy and Power

..... are the big advantages in utilising diesel engines, whether they are driving a train or a farm tractor. The heat loss is considerably less than that of gasoline engines. Diesel engines have exhaust temperatures of 700 to 900 degrees; gasoline engine temperature is about 1300 degrees. This shows that converting fuel into heat gets the most useful energy out of it. Less heat coming out of the exhaust pipe means that more heat has been utilized. The less heat you lose, the more power you are gaining.

Danny Sagriff, a first year trainee at Diesel Injection Service, is shown disassembling a fuel injection pump off an International B250 farm tractor.

"With the energy crisis, the diesel will be introduced into passenger cars and other small vehicles," notes Hans. "In Germany and England, most of the taxis have diesel engines. Tremendous advances have been made in the past 10 years, and the diesel technicians have had to return to school."

In addition to being the most economical thermal power engine produced in high quantities for a broad spectrum of applications, the diesel engine is in an advantageous position in regard to toxic exhaust fumes. These factors easily explain the growing interest in the diesel for vehicle applications and the continuing intensive development efforts. Research programs and developments are being carried out for further improvements such as: increasing the specific power in relation to weight and physical engine size; optimum use of fuel consumption over the whole speed range; reducing black smoke and exhaust emissions. We are approaching the day when most or all service stations will be adding another pump - clearly identified as diesel fuel.

Operation and maintenance economy coupled with dependability and long life made the diesel popular long before fuel conservation and soaring costs became such a mounting concern. North America is awakening to the inherent efficiency of the diesel engine for medium and light duty vehicles including passenger cars, now that we have been stung by a dwindling supply of the regular petroleum, and by the sharp rise in costs. We hear comments about 'gas going up to a dollar a gallon' and we cringe.

However, it is highly unlikely that there will be a landslide move to dieselization in light vehicles on this continent; at least, not for many years. But development and plans are afoot to replace gasoline engines with diesels in many types of medium and light duty trucks, and in various classes of passenger cars.

Fuel conservation is essential. The consensus of a number of established authorities is that, at present and projected consumption rates, the known reserves of petroleum fuels can last only into the early

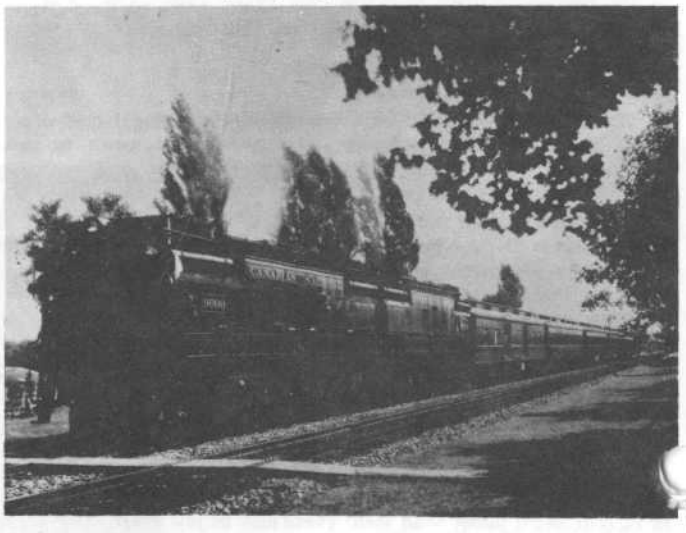
"I'm sold on it," says Hastings MP Jack Ellis, shown here with his 1972 Mercedes 220 Diesel. "This one has 120,000 miles on it now - the engines just don't wear out." Mr. Ellis finds it a very economical car to maintain. It's a 4 cylinder and has low power but that does not make him any less enthusiastic. "I'll never drive anything else."

2000's. Exploration and recovery costs at petroleum finds of recent years are phenomenal. It is logical then, to assume that the diesel, which is 30% more efficient than the gasoline engine, is going to be increasingly utilized.

Engine and vehicle builders take seriously the shortage of petroleum reserves, and their development activities, some announced and some rumored, are going on. Perhaps the most remarkable success in the diesel automobile market in North America is the Mercedes-Benz. It has long been more extensive in Europe. More than 40% of Mercedes' annual car production is now diesel. Since 1949, more than 1.5 million Mercedes diesel cars have been built, the last 500,000 in less than four years. The U.S. sales are about 15,000 diesel cars annually, with orders outstripping the company's ability to supply.

CN: First North American diesel locomotives

"The Diesel locomotive will surely come - sooner or later," said Rudolf Diesel to an audience at Cooper Union Hall in New York during his 1912 visit. After spending considerable time at the railroad station and freight yards, talking to train crewmen and yard employees in St. Louis, Herr Diesel took a train journey to Fayetteville, Arkansas, where the Frisco Railroad was trying out a new single passenger coach powered by two light gasoline engines. His interest in locomotives was further emphasized when he crawled under the car to better see how it worked. Diesel greatly respected other inventors including those



This photo of the first CN diesel train was taken at Dixie, about 30 miles east of Montreal, Que. in 1929. (Photo courtesy the Canadian National Railway)